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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/626,740	07/26/2000	Hajime Sakata	35.G2628	9371

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EXAMINER

DUVERNE, JEAN F

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 01/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/626,740

Applicant(s)  
Sakata et al

Examiner  
Jean Duverne

Art Unit  
2839



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 3, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22, 37-39, and 41 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22, 37-39, and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other:

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### **DETAILED ACTION**

1. In view of applicant's argument about the cylindrical shape of the waveguide, the examiner has decided to issue a second non-final office action to explicitly show a waveguide with the circular shape.
2. In regard to the restriction requirement, the examiner strongly believes the restriction requirement mailed on 6/6/2002 is proper for the aforementioned reason. Therefore, the restriction is maintained; and a full response to this office requires the cancellation of the non-elected claims.

### ***Claim Rejections - 35 U.S.C. § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 -10 and 12-13 and 37-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bischel et al (US patent 5,544,268) in view of Sheem (US patent 4,262,994).

In regard to claims 1-7, 37-39, and 41 Bischel's device discloses a waveguide (528) having an elongated profile, being formed of material transparent to light (see cols. 14, lines 14-59) to a light propagating along the partial cylindrical portion (see fig. 5) and plurality ends

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portions with the cylindrical shape with smooth joint, a cladding portion being in contact with a core of partial cylindrical parts with different substrate material (see cols. 35-36, lines 52-16) and being flat. However, Bischel's device fails to explicitly disclose the waveguide shape as being circular or cylindrical. Sheem's device discloses the waveguide (10) with the circular shape. It would have been mater to meet system design and requirement to have the waveguide with circular or cylindrical shape, since such modification would have involved a mere change in shape of a component. A change in shape is generally recognizing as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

For claims 12-13, Bischel's and Sheem's devices disclose the aforementioned limitations including the light emitting device such as laser placed on the substrate ( Bischel's: col 58, lines 26-67).

In regard to claims 8-10, Bischel's and Sheem's devices disclose the aforementioned limitations but fails to explicitly disclose the material of which the cylindrical portion and the substrate are made of. It would have obvious to one having ordinary skill of a worker in the art at the time the invention was made to choose known material such as resin, glass and quartz, since it has been held to within the general of a worker to select known material on the basis of the intended use as a matter system design and requirement. In re Leshin, 125 USPQ 416.

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4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bischel et al (US patent 5,544,268) in view of Sheem (US patent 4,262,994) as applied to claims 1 -10 and 12-13 and 37-39 and 41 above, and further in view of Bischel (US patent 6,208,791).

Bischel's (5544268) and Sheem's devices disclose the aforementioned limitations including the flat substrate but fail to explicitly disclose the substrate as being flexible. Bischel's device (6,208,791) discloses the substrate as being flexible ( see 905, and col. 15). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use flexible substrate such as the one taught in Bischel's structure (6,208,791) for improving the interconnection of Bischel's device (5544268).

5. Claims 14-15 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bischel et al (US patent 5,544,268) in view of Sheem (US patent 4,262,994) as applied to claims 1 -10 and 12-13 and 37-39 and 41 above, and further in view of Paniccia et al (6,125,217).

For claims 14-15, Bischel's and Sheem's devices disclose the aforementioned limitations including the light emitting diode (LED): col 58, lines 26-67 ( Bischel's device), but fail to explicitly disclose the semi-conductor material with a pn and pin junction. Paniccia's device discloses the semi-conductor material with a pn and pin junction (see cols. 4-5, lines 61-13). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add the semi-conductor material with a pn and pin junction such as the one taught in Paniccia's structure for improving the interconnection of Bischel's device.

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For claims 19-22, Bischel's and Sheem's devices disclose the aforementioned limitations the aforementioned limitations but fail to explicitly disclose semi-conductor chips formed on the substrate. Paniccia's device discloses the semi-conductor chips (see cols 3-4, lines 50-43) formed on the substrate. It would have obvious to one having ordinary skill of a worker in the art at the time the invention was made to choose known material such as semi-conductor chips since it has been held to within the general of a worker to select known material on the basis of the intended use as a matter system design and requirement. In re Leshin, 125 USPQ 416.

Claims 16-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bischel et al (US patent 5,544,268) in view of Sheem (US patent 4,262,994) as applied to claims 1 -10 and 12-13 and 37-39 and 41 above, and further view of Koh et al ( US patent 5,416,861).

Bischel's and Sheem devices disclose the aforementioned limitations the aforementioned limitations but fail to explicitly disclose the optical metal semi-conductor metal (MSM). Koh's device discloses the optical metal semi-conductor metal (see col. 17, lines 24-64). It would have obvious to one having ordinary skill of a worker in the art at the time the invention was made to choose known material such as semi-conductor chips since it has been held to within the general of a worker to select known material on the basis of the intended use as a matter system design and requirement. In re Leshin, 125 USPQ 416.

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***Conclusion***

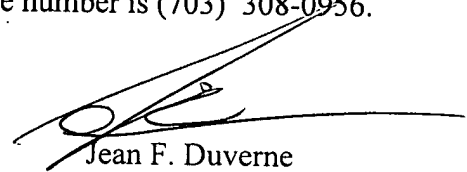
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duverne whose telephone number is (703) 305 - 0297 . The examiner can normally be reached from 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached on (703)308-2710. The fax phone number for this Group is (703) 308 - 7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

JFD

January 2, 2003



Jean F. Duverne

Patent Examiner, Art Unit 2839